

SOIL SAMPLING REPORT:
PROJECT #004-189-01

SAN ANTONIO PUMP STATION
555 CALAVERAS ROAD
SUNOL, CALIFORNIA
Jan. 1992

PREPARED BY ENVIRONMENTAL BIO-SYSTEMS, INC.

FOR

POWER ENGINEERING CONTRACTORS
1275 NORTH SAN ANTONIO ROAD
PALO ALTO, CALIFORNIA

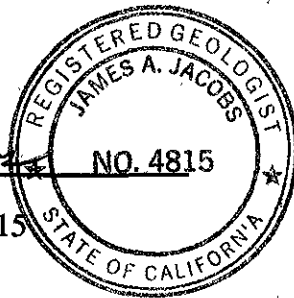
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January 10, 1991

TABLE OF CONTENTS

1.0) INTRODUCTION..... page 1

2.0) PURPOSE AND SCOPE OF WORK..... page 1

3.0) SITE DESCRIPTION..... page 2

4.0) UST REMOVAL PROCEDURES..... page 2

 4.1) Diesel Tanks (A&B)..... page 3

 4.2) Waste Oil Tank (C)..... page 4

5.0) EXPLORATORY TRENCHING..... page 5

6.0) EXPLORATORY BORINGS..... page 6

 6.1) November 21, 1991..... page 7

 6.2) December 18, 1991..... page 8

 6.3) Backfilling of Borings..... page 9

7.0) COLLECTION OF SOIL SAMPLES..... page 9

8.0) SOIL SAMPLE ANALYSES..... page 10

 8.1) Results of Analyses..... page 11

9.0) CONCLUSIONS..... page 11

10.0) RECOMMENDATIONS..... page 12

 10.1) Reportage..... page 14

11.0) LIMITATIONS..... page 15

12.0) REFERENCES..... page 16

TABLES

Table 1 Analytical Results for Soil Samples Collected
from Diesel Tank Storage Pile..... page 17

Table 2 Results of Profiling Analysis for Sample SP-
Profile..... page 17

Table 3 Results of Analysis of Soil Sample S1-10'..... page 18

Table 4 Heavy Metals Analysis for Soil Sample S1-10'... page 18

Table 5 Analytical Results for Soil Samples Collected
from Borings and Trenches..... page 19

FIGURES

Figure 1	Site Location Map.....	page 20
Figure 2	Site Diagram.....	page 21
Figure 3	Sample Locations - November 7, 1991.....	page 22
Figure 4	Sample Locations - November 18, 1991.....	page 23
Figure 5	Sample Locations - November 21, 1991.....	page 24
Figure 6	Sample Locations - December 18, 1991.....	page 25

APPENDICES

- Appendix A: Logs of Borings
- Appendix B: Laboratory Reports and Chain of Custody Documentation



ENVIRONMENTAL BIO-SYSTEMS, INC.

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1.0) INTRODUCTION

This document describes subsurface explorations conducted for Power Engineering Contractors (the Client) at the City of San Francisco, San Antonio Pumping Station located at 555 Calaveras Road in Sunol, California (the Site) by Environmental Bio-Systems, Inc. (EBS).

The site is owned by the City of San Francisco. The principal site contacts are:

Client Representative - Mr. Robert Beltramo, Power Engineering,
1275 North San Antonio Road, Palo Alto, CA 94303-4312,
(415) 969-9696.

Property Owner/Representative - Mr. John Hetzner, City and County
of San Francisco, Utilities Engineering Bureau, P.O. Box 730, 1000
El Camino Real, Millbrae, CA 94030, (510) 862-2973.

Consultant - Environmental Bio-Systems, Inc., 30028 Industrial
Parkway Southwest, Suite C, Hayward, CA 94544,
(510) 429-9988. Project Manager - Timothy M. Babcock.

2.0) PURPOSE AND SCOPE OF WORK

This report has been requested by the client to document the results of subsurface exploration performed at the site. The scope of work encompassed in this report includes the collection and analysis of soil samples from beneath 3 underground storage tanks (USTs) removed from the site. Also included in this report are the results of further subsurface

explorations performed in response to the detection of impacting constituents in soil from beneath 1 of the former USTs.

3.0) SITE DESCRIPTION

The site is located at 555 Calaveras Road in the City of Sunol and County of Alameda, California. A Site Location Map has been presented as Figure 1. A Site Diagram showing the locations of samples as well as relevant site structures and references, has been included in this report as Figure 2.

The site is located in a rural area. The topography of the site slopes noticeably towards the west. A commercial plant nursery is located to the west of the site.

One building was noted to be present on the site. The building houses a water distribution pump station. Diesel powered generators were previously fed by Tanks A and B. Used motor oil was stored in Tank C. A concrete bermed containment area at the southwest corner of the building was observed to contain several drums of both new and used motor oil.

4.0) UST REMOVAL PROCEDURES

On July 11, 1991, the client contracted EBS to collect soil samples and document their excavation and removal of 3 USTs from the site. All three tanks were observed to be partially unearthed upon arrival at the site. Tanks A and B were located at the east side of the building. Tank C was located at the west side of the building. Inspector Scott Seery of the Alameda County Health Department (ACHD) was present to witness the collection of soil

samples. Figure 3 shows the locations of tanks and soil samples collected during removal of the tanks.

4.1) Diesel Tanks (A & B)

Tanks A and B were both constructed of single walled steel coated with a tar-paper wrapping. The product contained within the tanks was reported by the client to have been diesel. The tanks were set into, and partially surrounded by concrete. The volume of each tank was calculated to be approximately 10,000 gallons. Both tanks were observed to be in good condition. No significant rusting, pitting, or scaling was observed. The tar wrappings were observed to be largely intact.

The concrete slab into which the tanks were set was deep enough to cover approximately 2 to 3-feet of the bottom halves of the tanks. No obvious hydrocarbon odor or staining were noted during removal. At the discretion of Inspector Seery and the client, in view of the concrete encasement of the tanks, no soil samples were collected from beneath Tanks A and B.

Approximately 140 cubic yards of soil were excavated during removal of USTs A and B. Discrete soil samples were collected from the pile at a frequency of 1 per 20-cubic yards (cys) for a total of 7 samples. Samples S1 through S7 were analyzed at Anametrix, Inc. a certified hazardous waste testing laboratory for total petroleum hydrocarbons as diesel (TPHd). The results of these analyses are summarized in Table 1. Copies of the laboratory reports of soil samples and accompanying chain of custodies are presented in Appendix B.

140 yd³
Detectable TPH-D
found (<100ppm)
in 4 of 7
samples.

Concentrations of TPHd exceeding 10-parts per million (ppm) but less than 100-ppm, were found in 4 of the 7 samples analyzed. Based upon these results, the excavated soil pile was shipped to Vasco Road Landfill in Livermore, California. Prior to disposal, sample SP-Profile was collected from the soil storage pile and analyzed for reactivity, corrosivity, and ignitability (RCI) at Sequoia Analytical, a certified hazardous waste testing laboratory, to complete landfill profiling requirements. A summary of additional analyses required to complete profiling of the soil for disposal is included in Table 2.

4.2) Waste Oil Tank (C)

Tank C was a single walled steel vessel of 1,000 gallon capacity. The tank was observed to be in good condition. No significant rusting, pitting, or scaling were observed on its' surface. The UST was reported to have contained used motor oil.

A strong hydrocarbon odor was noted in soil from below the tank. The tank was surrounded by a coarse grained sand fill containing medium to large gravel. Sample collection was complicated by the loose composition of the fill material and the presence of a 64-inch diameter water main lying approximately 6-feet to the west of the tank. The location of the water main limited the maximum depth of excavation of the backhoe to approximately 10-feet. Due to continued collapse of loose fill material, the exact depth at which the sample was taken could only be approximated. The depth of collection of S1-10' was estimated to be 10-feet below grade in the coarse grained sand fill.

*depth of
excavation
limited by
underlying
64" water
main*

Approximately 10-cubic yards of soil were excavated during the removal and sampling of Tank C. The soil was stored to the west of the former UST on asphalt and covered with visqueen.

10 yds³
removed

Sample S1-10' was analyzed at Anametrix, Inc. for the following compounds: total petroleum hydrocarbons as gasoline (TPHg), TPH as diesel (TPHd), total oil and grease (TOG), volatile organic compounds, semi-volatile organic compounds, and the heavy metals: cadmium (Cd), chromium (Cr), Nickel (Ni), Lead (Pb), and Zinc (Zn). The results of the analyses performed on sample S1-10' are contained in Table 3.

The results of laboratory analyses performed on sample S1-10' indicated reportable quantities of TPHg, TPHd, TOG, and the polynuclear aromatic compounds (PNA's), 2-methylnaphthalene and phenanthrene. Detected levels of Cr, Ni, Pb, and Zn were all present at well below the action limits defined in Title 22 of the California Administrative Code (CAC T22). Based upon the results of analysis, the soil storage pile from the Tank C excavation was held on-site for future disposal or treatment.

} TPH-G/D
TOG
PNA's

5.0) EXPLORATORY TRENCHING

On November 21, 1991, EBS personnel returned to the site to supervise further subsurface exploration in the vicinity of the former Tank C excavation. At the request of the client, an attempt was made to excavate 3 exploratory trenches using a backhoe. The proposed locations of the trenches were to be to the west, south, and north of the excavation. Table ~~4~~⁵ lists the results of the analysis of soil samples collected from the borings and trenches installed during expanded subsurface explorations of the Tank C area. Table ~~4~~⁵ shows the locations of samples collected on this date.

Trench A was excavated through soil to a depth of 9-feet, where weathered and fractured sandstone was encountered across the length of the trench. Sample TA-10' was collected from the trench at a depth of 10-feet. Excavation was halted at 11-feet in solid sandstone.

Sample TA-10' was analyzed for TPHd and found to contain a low concentration of diesel. A notation was included from the laboratory along with these results stating that the reported concentration of diesel was primarily due to a heavier hydrocarbon compound such as motor oil.

Due to an unanticipated vehicular obstruction of the area north of the excavation, trench B was not excavated from this location as anticipated.

Trench C was attempted at approximately 10-feet to the south of the excavation, along the edge of the building. Access for excavation was restricted both by the adjacent water main and drain line found at approximately 4-feet below grade along along the building. The maximum depth reached was 7-feet. No samples were analyzed from this trench.

6.0) EXPLORATORY BORINGS

Borings were logged by an EBS staff engineering geologist under the supervision of a state registered geologist. Appendix A includes the logs of borings.

} ?? Boring
 log for EB-7,
 directly adjacent
 to trench does
 not identify
 SS at this (9')
 or any other
 depth to 15' (SS);
 only moist clayey
 silt (1-4'),
 gravelly sand
 (4-11'); and,
 gravel (11-15').

6.1) November 21, 1991

On November 21, further subsurface exploration and sampling was performed in the area of the Tank C excavation. Three exploratory soil borings were drilled at this time. Samples were collected at a 5-foot interval beginning at a depth of approximately 10-feet. Figure 5 shows the locations of samples collected on this date.

Bayland Drilling Company of Menlo Park, California (C57 #374152) was contracted to perform drilling services. Drilling was accomplished using a CME-55 rotary auger drill rig using 8-inch hollow stem augers.

Boring EB1 was drilled approximately 20-feet to the south of the pit. The boring was terminated at a depth of 15-feet in unfractured gray silt stone. Sample EB1-14-1/2', collected from between the depths of 14-1/2 and 15-feet, was selected for analysis.

Why the 14.5' sample?

Boring EB2 was located beneath the former UST location. The maximum depth of drilling was 23-1/2-feet. The soils encountered were noted to be sands and gravels above a depth of 12-feet, and clayey silts to the depth of termination. Sample EB2-10-1/2', collected from between the depths of 10 and 10-1/2-feet, was selected for analysis.

Boring EB3 was drilled approximately 20-feet to the north of the excavation. Sandstone bedrock was noted from a depth of 13-feet to the bottom of the boring at 25-feet. Sample EB3-13-1/2', collected from between the depths of 13 and 13-1/2-feet was selected for analysis.

this doesn't reflect boring logs! (silt w/ gravel) and clayey silt

6.2) December 18, 1991

On December 18, 4 additional soil borings were advanced and sampled in the area of the Tank C excavation. Samples were generally collected at a 5-foot interval beginning at a depth of approximately 10-feet. Figure 6 shows the locations of samples collected on this date.

Drilling was performed by S&G Drilling Company of Menlo Park, California (C-57 #589237) under the direction of EBS. Borings EB4, EB5, and EB7 were drilled using a Failing F-2 rotary auger drill rig using 8-inch hollow stem augers. Boring EB6 was advanced inside the bermed drum containment area using a bobcat mounted drilling attachment set up for continuous soil sampling.

Boring EB4 was located approximately 30-feet to the southwest of the tank pit. The boring was terminated at a depth of 20-feet in a gravelly sand with occasional boulders. Water was noted in the boring at a depth of 16-1/2-feet. Sample EB4-15-16', collected from approximately 15 to 16-feet within the boring, was retained for analysis.

GW @ 16.5' B

Boring EB5 was drilled approximately 40-feet to the west of the tank excavation. The boring was abandoned at 20-feet in gravel. Water was noted at a depth of 19-feet. No samples were analyzed from within the boring.

Boring EB6 was advanced approximately 40-feet to the south of the pit. The bobcat-mounted sampling attachment was used to advance a California split spoon sampler at 36-inch intervals. The boring was terminated at a depth of 11-feet where the sampler became lodged in a gravel bed. Samples

EB6-2', EB6-5', and EB6-9' were retained for analysis. The samples were collected from respective depths of 2-feet, 5-feet, and 9-feet.

*why only for
TOG?
why not TPH-D?*

Boring EB7 was drilled approximately 24-feet to the west of the pit. The boring was terminated at a depth of 15-feet in gravel. Sample EB7-10' was collected from a depth of 10-feet and retained for analysis.

6.3) Backfilling of Borings

Soil borings EB1 through EB7 were destroyed following the collection of samples. A cement grout mixture was either poured or pumped into each individual boring. All grout fills were completed to grade.

7.0) COLLECTION OF SOIL SAMPLES

Soil samples taken during drilling were collected using an 18-inch California-modified split-barrel sampler. The split barrel sampler was driven 18-inches into undisturbed soil within the boring using a down-hole drop-hammer (typically, 140-pounds). Samples were removed from the sampler as soon as it was opened, and the ends of the brass liners containing soil designated for laboratory analysis were wrapped with aluminum foil and sealed with plastic caps. Duct tape was wrapped around the cap at its joint with the liner to reduce the loss of volatile constituents. The sample tubes were labelled, stored on ice, maintained, transferred, and delivered to a certified analytical laboratory in keeping with chain of custody procedures.

The sampler was washed with phosphate free detergent and triple-rinsed with distilled or deionized water between the collection of samples. Steam cleaning of the sampler was also performed between borings along with augers to prevent cross-contamination.

Samples collected from the backhoe bucket were taken from freshly exposed surfaces approximately 2 to 4-inches above the teeth of the bucket. A 2-inch diameter brass tube, 6-inches in length, was driven into the soil using a wooden mallet. Once collected, the samples were prepared as described above, and transported under chain of custody to the designated laboratory.

8.0) SOIL SAMPLE ANALYSES

Samples collected from borings EB4 through EB7 were analyzed on-site by Mobile Chem Labs, Inc. (Martinez, California) in a certified mobile hazardous materials testing laboratory. Sample SP-Profile was split for analysis of BTEX at Anametrix, Inc., of San Jose, California, and RCI at Sequoia Analytical in Redwood City, California. Both Anametrix, Inc. and Sequoia Analytical are certified hazardous materials testing laboratories. All other samples were analyzed at Anametrix, Inc.

TPHd was quantified using a modified EPA method 8015, TPHg and BTEX were measured using a modified EPA method 8015/8020. Volatile organic compounds and semi-volatile organic compounds were analyzed by EPA methods 8240 and 8270, respectively. Metals analyses were performed using EPA method 6010 for Cd, Cr, Ni, Pb, and Zn. Analysis of sample SP-Profile-S for BTEX was done by a modified EPA method 8020. Analyses performed on sample SP-Profile included; pH by EPA

method 9040, ignitability (Pensky-Martens), reactivity with water, reactivity with sulfide by EPA method 9030, and reactivity with cyanide by EPA method 9010.

Analytical methods utilized by the laboratories used were consistent with the State Water Resources Control Board (SWRCB) guidelines and approved analytical methodologies specified in EPA document SW846.

8.1) Results of Analyses

Copies of the laboratory reports and chain of custody documentation maintained during transportation of soil samples are included in Appendices B and C. The results of soil sample analyses are presented in this section and summarized in Tables 1 through 5.

9.0) CONCLUSIONS

Two 10,000-gallon diesel USTs, located along the east side of the building, were found to be partially encased in concrete. Upon removal, neither tank exhibited signs of significant rusting or corrosion.

Approximately 140-cubic yards of soil excavated from above the tanks was found to contain TPHd at an average concentration of 36-ppm. The entire storage pile was removed to the BFI Vasco Road Landfill in Livermore, California.

Concentrations of heavy metals were sampled for and found in sample SP-Profile. The levels reported are below the typically enforced action limits presented in CAC T22.

Concentrations of hydrocarbon compounds in excess of 1,000-ppm were found in a soil sample collected from beneath a 500-gallon waste oil UST located along the west side of the building (Tank C). Analysis for volatile and semi-volatile organic compounds revealed reportable levels of 2 PNA's (2-methylnaphthalene, and phenanthrene). A sample collected from sandstone bedrock encountered at approximately 1-1/2 to 2-feet deeper beneath this location was not found to contain TPHd (the impacting constituent found at the greatest concentration in the upper sample).

Concentrations of hydrocarbons in excess of 400-ppm were encountered in soil sampled from a depth of 14-1/2 to 15-feet from a location approximately 10-feet to the south of the tank pit (boring EB1). Analysis of a sample collected from sandstone bedrock approximately 15-feet to the west of the pit (trench A) showed a hydrocarbon concentration of 51-ppm at a depth of 10-feet.

Water was encountered in two of the 7 soil borings advanced. The depths at which water was observed in borings EB4 and EB5 were 16-1/2 and 19-1/2-feet, respectively.

10.0) RECOMMENDATIONS

The discovery of impacting constituents in soil sampled from beneath the former waste oil UST constitutes a confirmed release of product. Appropriate measures, as described in the SWRCB document "Guidelines for Addressing Fuel Leaks", entail evaluation of both the vertical and horizontal extents of impact in soil and groundwater. The explorations performed within the scope of work described in this report were intended

to provide information to explore the limits of impact in unsaturated soil beneath the site.

Alternatives should be considered to address the removal or remediation of impacted soil known to exist in the area of the waste oil tank pit as well as those areas indicated to the west and south. Available options include excavation and disposal, bioremediation, and chemical fixation.

The presence of hydrocarbons in excess of 100-ppm in soil, given a possibly shallow depth to groundwater, presents a potential impact to groundwater. Further exploration of the quality of the shallow water bearing zone should be performed. A minimum of 3 groundwater monitoring wells should be installed, developed, and sampled at the site. Proper well monitoring protocol would include the collection of water samples for laboratory analysis and evaluation of the direction of groundwater flow for a minimum of 4 consecutive quarters over a one year time period. The duration of monitoring may be extended in the event that an impact to groundwater is detected.

If the soil remediation protocol used allows detectable concentrations of impacting constituents to remain in the subsurface of the site, a risk assessment should be performed. In addition to gasoline and diesel hydrocarbons and the oil and grease found, the noted existence of PNA's in the subsurface of the site may further compound the possibility of associated health risks. A risk assessment may be needed to address the long term concerns presented by residual levels of these constituents.

10.1) Reportage

We recommend that you forward copies of this report to the regulatory agencies and representatives listed below. Copies of this report have been included for this purpose. It is important that a signed cover letter from the property owner be included with each forwarded report attesting to the validity of the information included in this report, to the best of their knowledge.

California Regional Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street, Suite 3
Oakland, CA 94559
ATTN: Richard C. Hiatt

Alameda County Health Agency
Division of Hazardous Materials
Dept. of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621
ATTN: Scott Seery

11.0) LIMITATIONS

The recommendations in this report were developed in accordance with generally accepted standards of current environmental practice in Northern California. These recommendations are time-dependant and should not be considered valid after one year from the date of issue of this report. After the one year period, site conditions and these recommendations should be reviewed.

This exploration was done solely for the purpose of evaluating environmental conditions of the soil related to hydrocarbon product contamination at the subject site. No soil engineering or geotechnical references are implied or should be inferred.

Evaluation of the conditions of the site, for the purposes of this study, was made from a limited number of observation points. Subsurface conditions may deviate away from these points. Additional work, including further study of the subsurface, can reduce the inherent uncertainties associated with this type of study.

This study was performed and the report was prepared for the sole use of our client, Power Engineering Contractors. It is the responsibility of the Client to convey these recommendations to regulatory agencies and other parties, as appropriate.

The recommendations herein are professional opinions that our firm has endeavored to provide with competence and reasonable care. We are not able to eliminate the risks associated with environmental work. No guarantees or warrants, express or implied, are provided regarding our recommendations.

12.0) REFERENCES

United States Geological Survey (USGS), Topographic Map, La Costa Valley Quadrangle, 7.5-minute with 10-foot contour intervals, 1929, photorevised 1968.

**TABLE 1 - ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM
DIESEL TANK STORAGE PILE (ug/kg)**

SAMPLE #	TPH AS DIESEL	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES
SP1	*ND	ND	ND	ND	ND
SP2	62	ND	ND	ND	ND
SP3	89	ND	ND	ND	ND
SP4	47	ND	ND	ND	ND
SP5	ND	ND	ND	ND	ND
SP6	52	ND	ND	ND	ND
SP7	ND	ND	ND	ND	ND

*ND = Analyte not detected above the stated limits of detection.

Note: Detection limits used - TPH as gasoline = 0.5 mg/kg, TPH as diesel = 10 mg/kg, BTEX = 0.5 mg/kg.

**TABLE 2 - RESULTS OF PROFILING ANALYSIS FOR SAMPLE SP-PROFILE
(results in mg/kg)**

ANALYSES	DETECTION LIMIT	SAMPLE SCC1 A-D
Benzene (ppm)	0.005	*ND
Toluene (ppm)	0.005	ND
Xylenes (ppm)	0.005	ND
Reactivity with water	**NA	Negative
Reactivity with sulfide (ppm)	10	ND
Reactivity with cyanide (ppm)	0.50	ND
Corrosivity (pH)	NA	9.1
Ignitability	NA	Greater than 100°Celsius

*ND = Analyte not detected above the stated limits of detection.

**NA = detection limit not applicable

TABLE 3 - RESULTS OF ANALYSIS OF SOIL SAMPLE S1-10' (results in mg/kg)

TPHg	TPHd	TOG	VOLATILE ORGANICS	SEMI-VOLATILE ORGANICS
*990	3,800	1,600	**ND	methylnaphthalene - 20.0 phenanthrene - 4.5

* = Quantity noted by lab to be due to heavier hydrocarbon product, possibly diesel

**ND = Analyte not detected above the stated limits of detection.

Notes:

- For EPA methods 8240 & 8270, only those compounds detected above reporting limits are listed above. See enclosed laboratory reports for the range of compounds included, and their respective detection limits.
- Analysis of sample S1-10' for heavy metals included in Table 4
- Detection limits used - TPH as gasoline = 0.5 mg/kg, TPH as diesel = 100 mg/kg, TOG = 30 mg/kg, see laboratory reports for the detection limits of individual compounds included in EPA methods 8240 & 8270.

TABLE 4 - HEAVY METALS ANALYSIS FOR SOIL SAMPLE S1-10' (results in mg/kg)

METAL	DETECTION LIMIT	SAMPLE SCC1 A-D
CADMIUM (Cd)	0.25	*ND
TOTAL CHROMIUM (Cr)	0.50	48.3
NICKEL (Ni)	2.0	61.7
LEAD (Pb)	2.0	3.2
ZINC (Zn)	1.0	40.3

*ND = Analyte not detected above the stated limits of detection.

methylnaphthalene - CAS 91-57-6
 - combustible

phenanthrene - CAS 85-01-8
 - moderately toxic (mg.)
 - exp. neoplastigen + carcinogen
 - combustible

**TABLE 5 - ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM
BORINGS AND TRENCHES (mg/kg)**

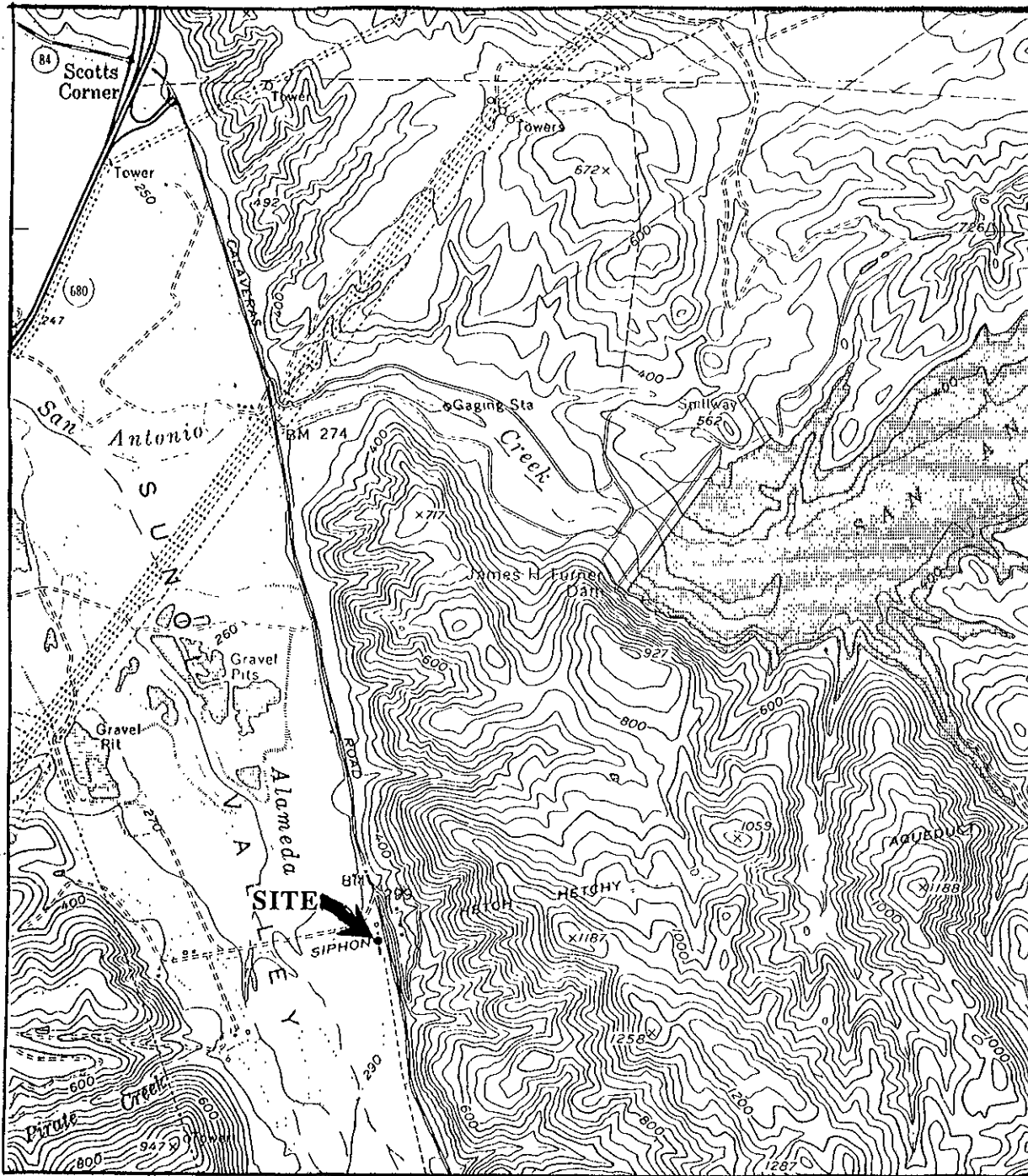
BOREHOLE/ TRENCH #	SAMPLE #	TPHd	TOG
Trench A	TA-10'	*51	-
EB1	EB1-14.5'	*410	--
EB2	EB2-10.5'	**ND	--
EB3	EB3-13.5'	ND	--
EB4	EB4-15-16'	-	ND
EB6	EB6-2'	-	ND
EB6	EB6-5'	-	ND
EB6	EB6-9'	-	ND
EB7	EB7-10'	-	ND

* = Quantity noted by lab to be due to heavier hydrocarbon product, possibly motor oil

**ND = Analyte not detected above the stated limits of detection.

Note: Detection limits used - TPH as diesel = 10 mg/kg, TOG = 50 mg/kg.





Source: USGS Topographic Map, La Costa Valley Quadrangle

SCALE - 1:24,000



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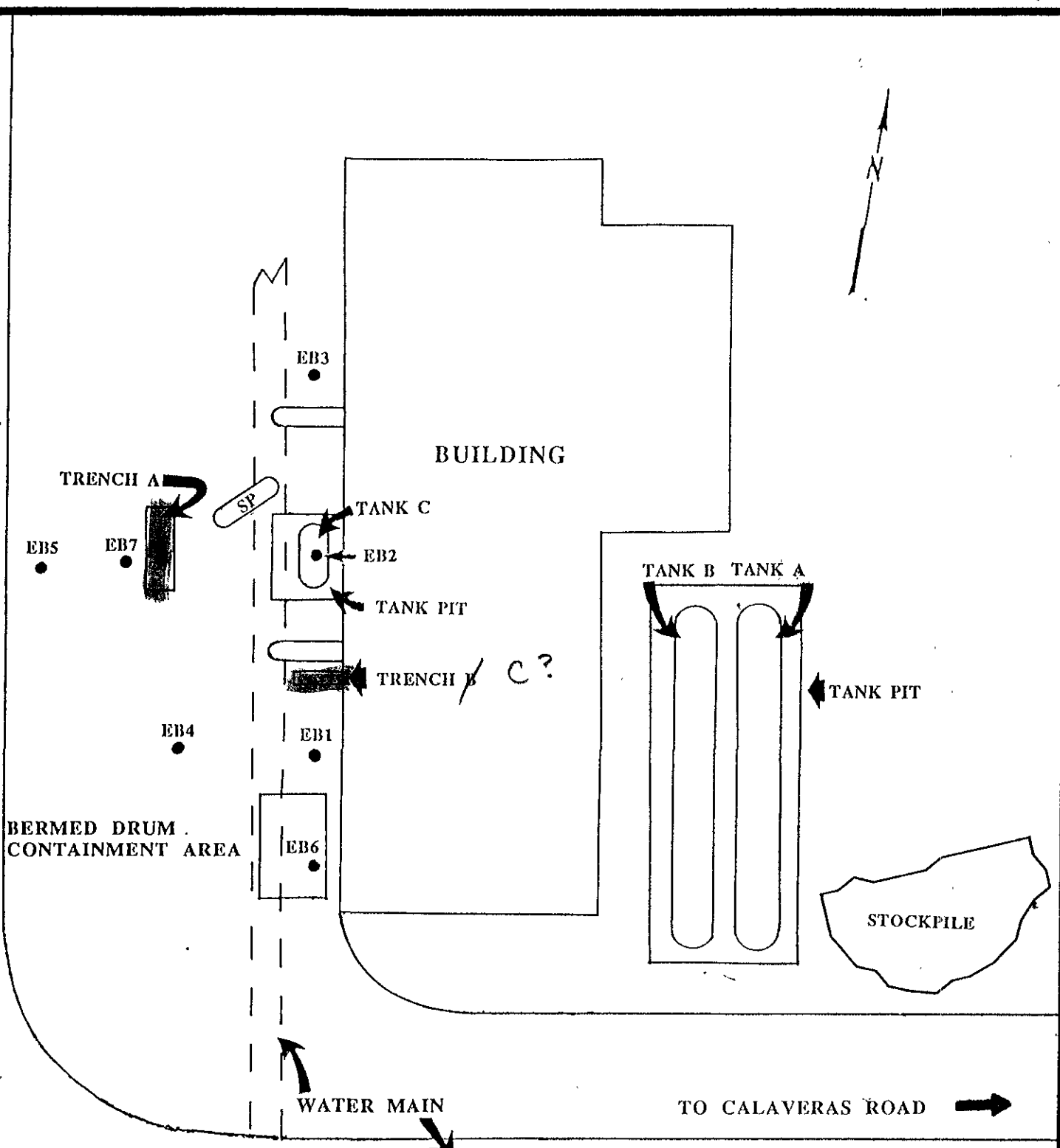
DATE: JAN 1991

DRWN BY: SLS

APPRVD: TMB

**FIGURE 1: SITE
 LOCATION MAP**

**SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA**



LEGEND

EB7 • - SOIL BORING
 SP - STOCKPILE

SCALE - 1" = 20'



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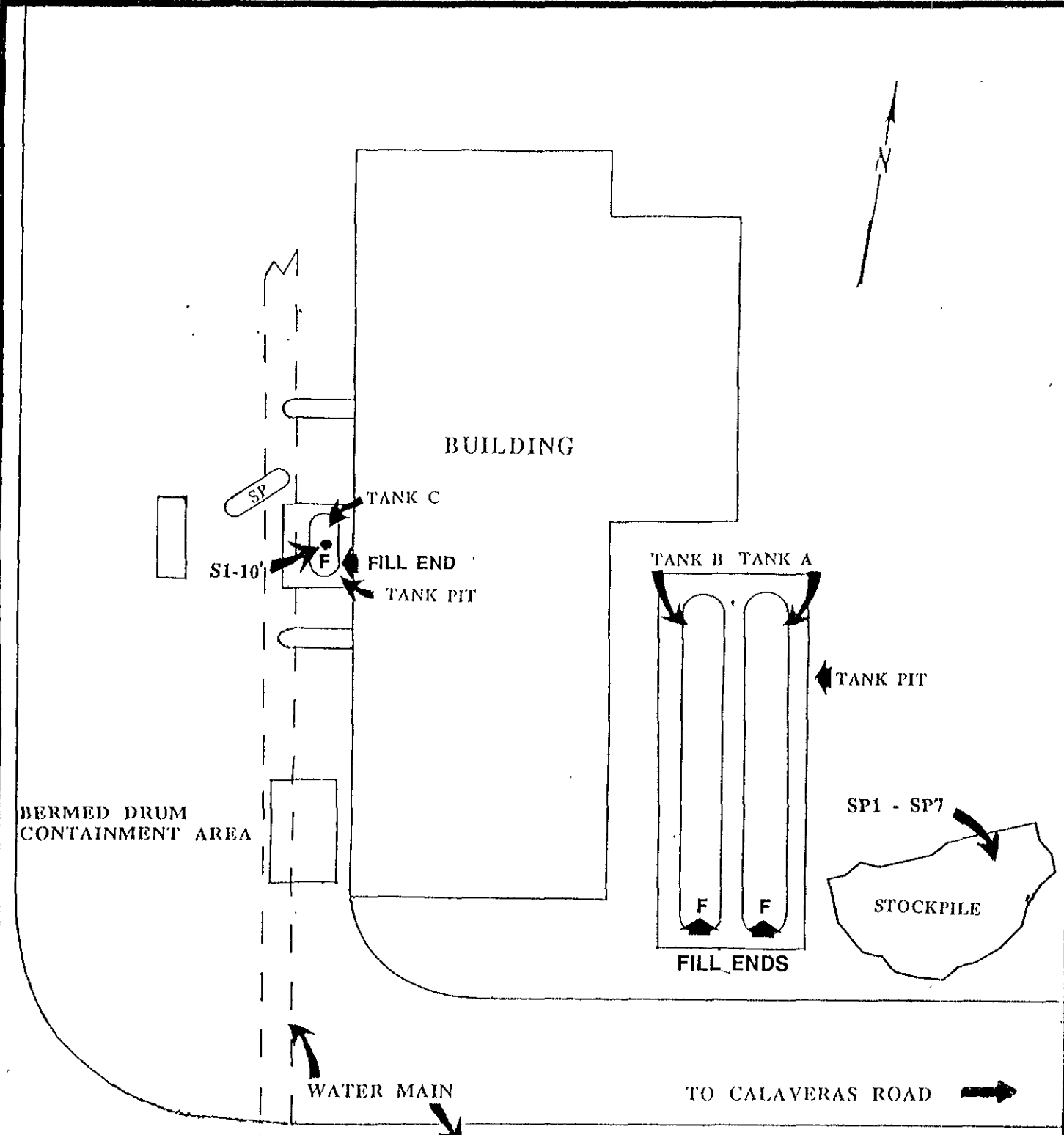
DATE: JAN 1991

DRWN BY: SLS

APPRVD: TMB

FIGURE 2: SITE DIAGRAM


SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA

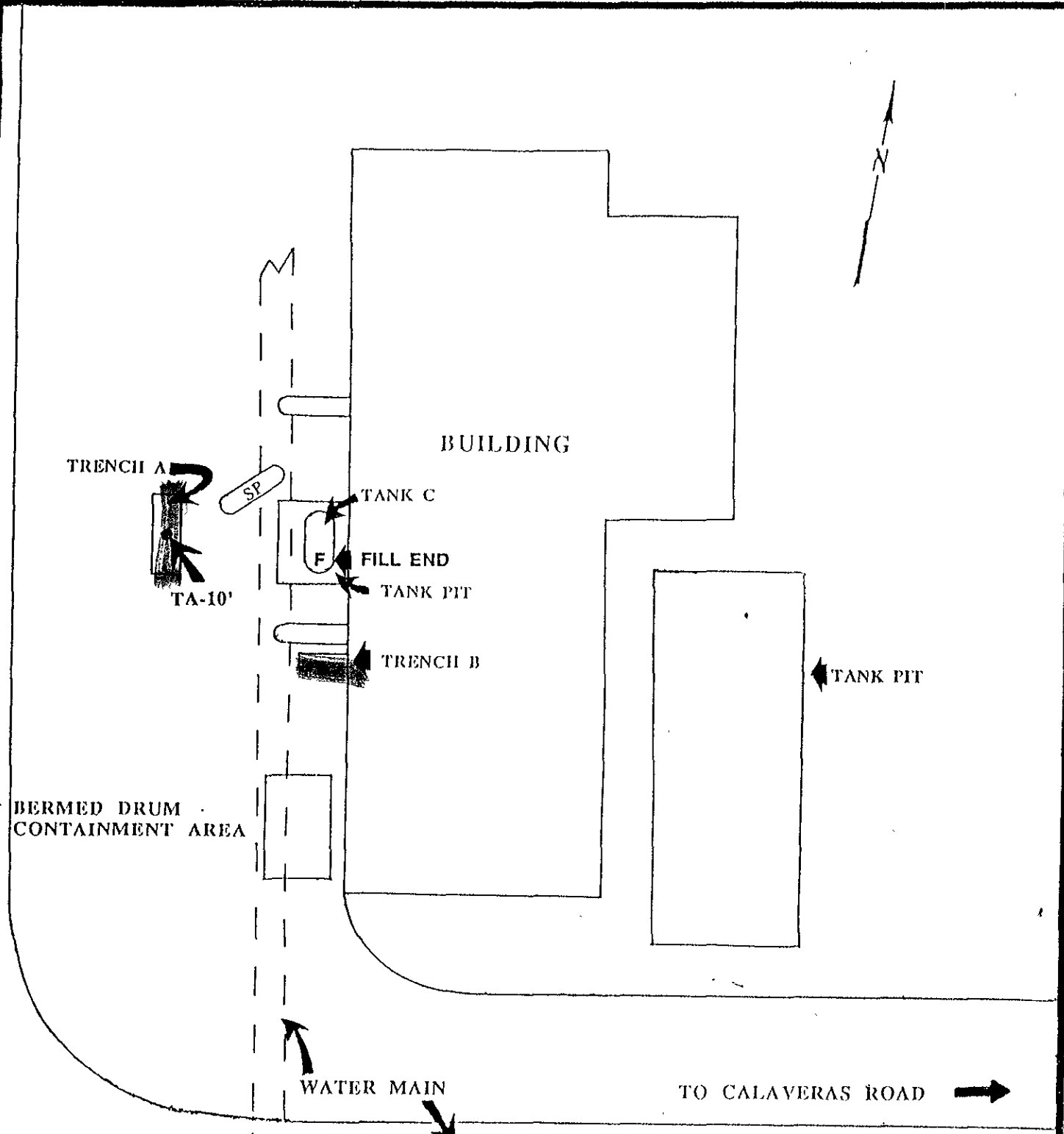


LEGEND

SP7' - SOIL SAMPLE FROM STOCKPILE
 S1-10' - SOIL SAMPLE FROM TANK PIT
 SP - STOCKPILE

SCALE - 1" = 20'

 <p>ENVIRONMENTAL BIO-SYSTEMS, INC. Innovative Solutions for a Better Environment</p> <p>30028 Industrial Pkwy., SW. Suite C Hayward, CA 94544</p>	<p>DATE: JAN 1991</p>	<p>FIGURE 3: SAMPLE LOCATIONS-NOV. 7, 1991</p>
	<p>DRWN BY: SLS</p>	
	<p>APPRVD: TMB</p>	



LEGEND

TA-10' - SOIL SAMPLE |
 SP - STOCKPILE

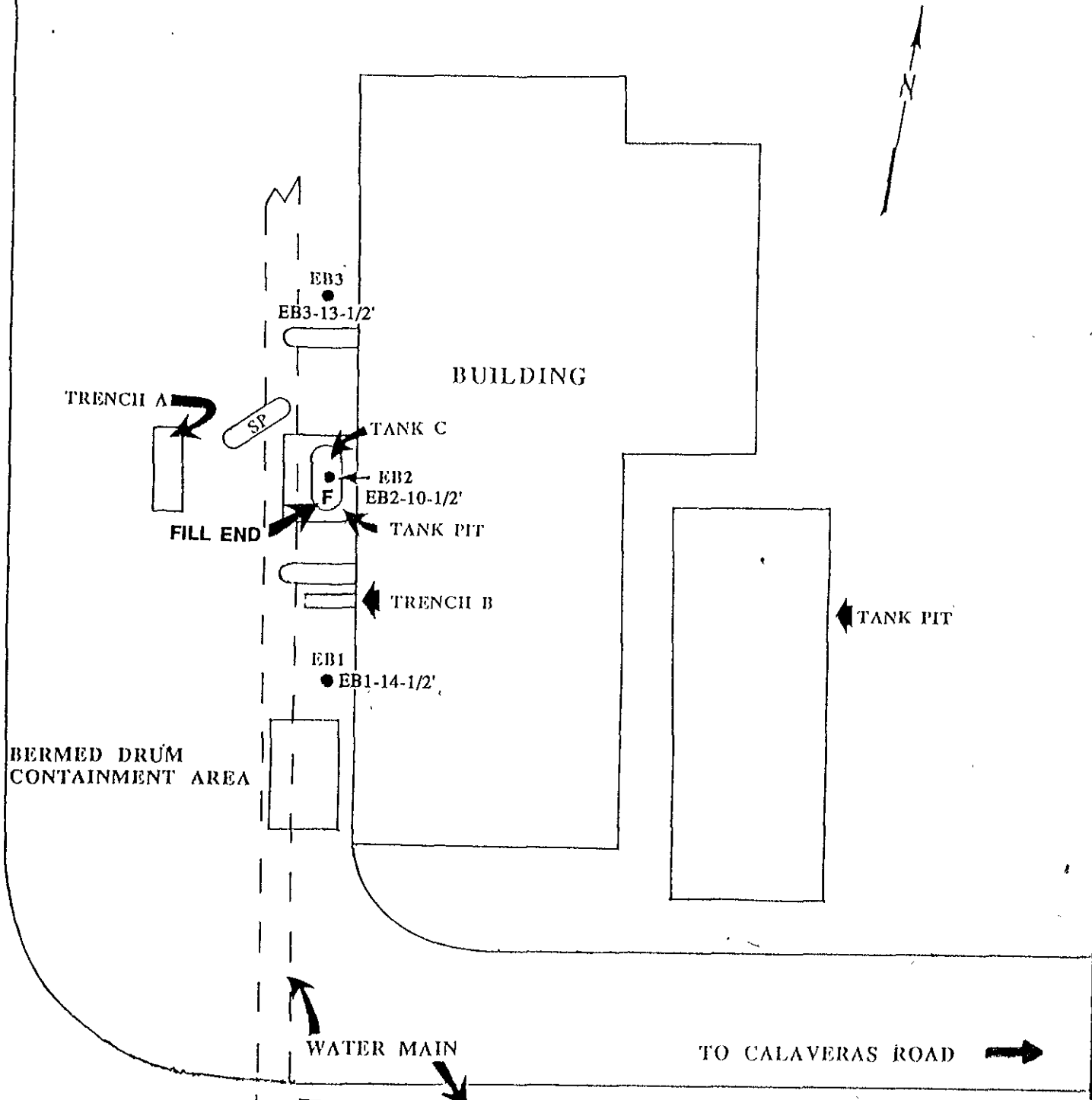
SCALE - 1" = 20'



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DATE: JAN 1991
 DRWN BY: SLS
 APPRVD: TMB

FIGURE 4: SAMPLE LOCATIONS-NOV. 18, 1991
 SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA



LEGEND

EB3 - SOIL BORING
 EB3-24-1/2' - SOIL SAMPLE
 SP - STOCKPILE

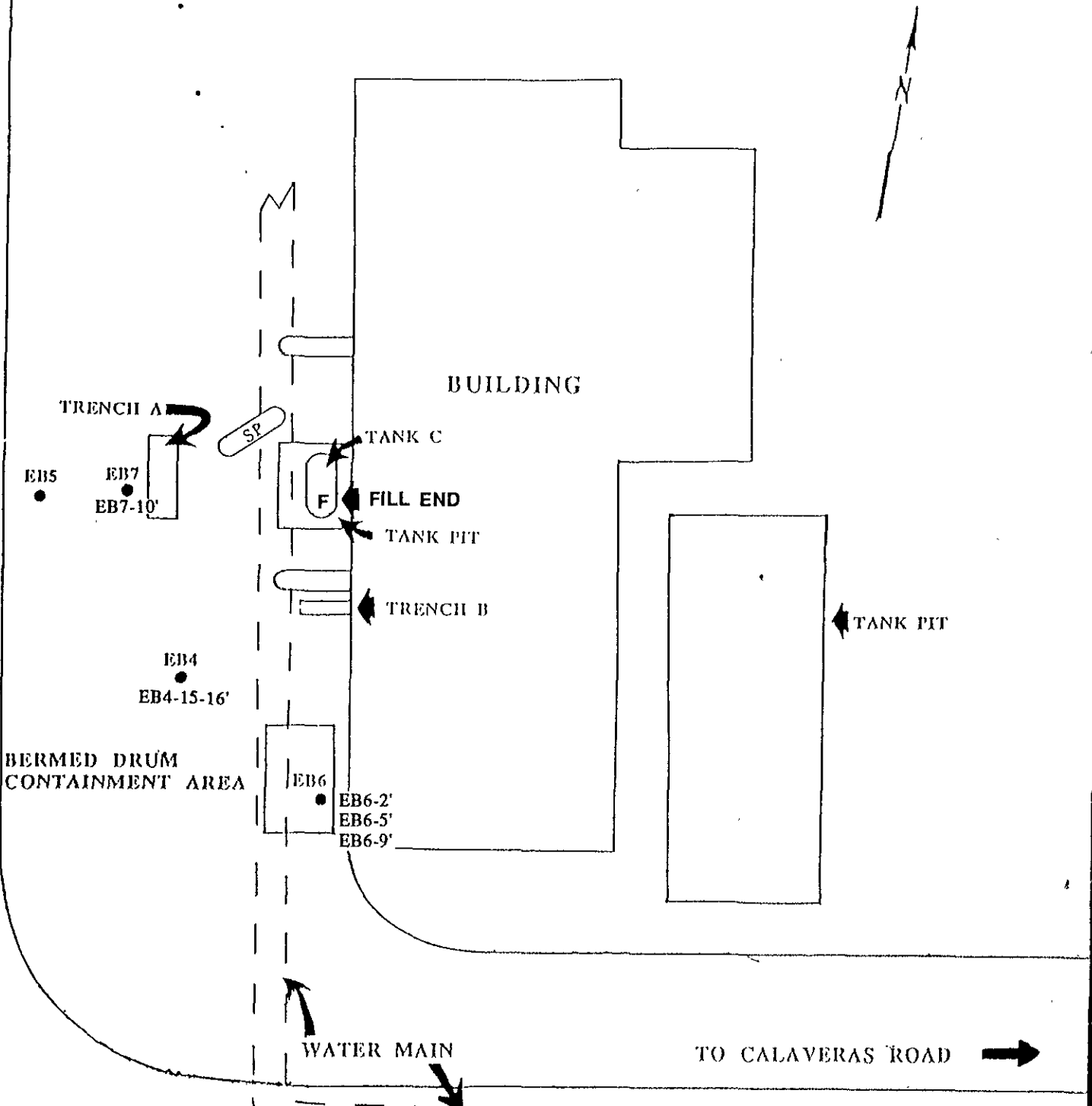
SCALE - 1" = 20'



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 30028 Industrial Pkwy., SW.
 Suite C
 Hayward, CA 94544

DATE: JAN 1991
 DRWN BY: SLS
 APPRVD: TMB

FIGURE 5: SAMPLE LOCATIONS-NOV. 21, 1991
 SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA



LEGEND

EB7 - SOIL BORING ;
 EB7-10' - SOIL SAMPLE
 SP - STOCKPILE

SCALE - 1" = 20'



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 Suite C
 Hayward, CA 94544

DATE: JAN 1991

DRWN BY: SLS

APPRVD: TMB

FIGURE 6: SAMPLE
 LOCATIONS-DEC. 18, 1991

SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA

January 10, 1991

Power Engineering Contractors
San Antonio Pumping Station
555 Calaveras Road
Sunol, CA

A

APPENDIX A

LOGS OF BORINGS

SOIL BORING LOG

BORING DESIGNATION: EB1
 DATE OF DRILLING: 11-21-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Gravelly Sand with some Silt, light gray, loose, damp, no hydrocarbon odor
-2-							
-3-							
-4-							
-5-							
-6-							
-7-							
-8-							
-9-							
-10-							
-11-							Coarse Sandy Gravel with traces of Clay, light gray to gray, damp, no hydrocarbon odor
-12-	1						
-13-							<div style="position: relative; height: 100px;"> siltstone </div> Clayey Silt, gray, massive, very compact, damp, no hydrocarbon odor
-14-							
-15-	2						
-16-							BOTTOM OF BORING AT 15'
-17-							
-18-							
-19-							
-20-							



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 3002B Industrial Pkwy., S.W.
 Sulte C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

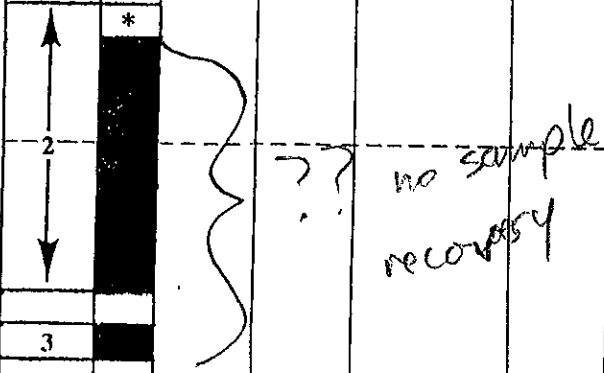
SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB2
 DATE OF DRILLING: 11-21-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							
-2-							
-3-							
-4-							
-5-							
-6-							
-7-							
-8-							
-9-							
-10-							
-11-	1						Gravelly Sand with some Silt, light gray, loose, damp, no hydrocarbon odor
-12-							
-13-							
-14-							
-15-	*						Coarse Sandy Gravel with Clay bindings, light gray to gray, damp, no hydrocarbon odor
-16-							
-17-							
-18-							
-19-							
-20-	3						Clayey Silt, gray, massive and compact, damp, no hydrocarbon odor



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 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB2 MONITORING WELL INSTALLED: _____
 DATE OF DRILLING: 11-21-91 WELL DIAMETER: _____
 CASING TYPE: _____ SLOT SIZE: _____
 LOGGED BY: AMM H. ANAM SIGNATURE: _____
 REGISTRATION: _____ EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-21-							
-22-							
-23-	4						Clayey Silt, gray, massive and compact, damp, no hydrocarbon odor
-24-							BOTTOM OF BORING AT 23-1/2'
-25-							
-26-							
-27-							
-28-							
-29-							
-30-							
-31-							
-32-							
-33-							
-34-							
-35-							
-36-							
-37-							
-38-							
-39-							
-40-							



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment

30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992

JOB NO: 004-189-02

DRAWN BY: SLS

APP'D BY: TMB

SITE:

SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB3 MONITORING WELL INSTALLED: _____
 DATE OF DRILLING: 11-21-91 WELL DIAMETER: _____
 CASING TYPE: _____ SLOT SIZE: _____
 LOGGED BY: AMM H. ANAM SIGNATURE: _____
 REGISTRATION: _____ EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Asphalt
-2-							
-3-							
-4-							
-5-							
-6-							
-7-							
-8-							
-9-							
-10-							
-11-							Gravelly Silt with Clay, gray to bluish gray, damp, no hydrocarbon odor
-12-							
-13-	1						
-14-							Clayey Silt with Gravel, bluish gray to pale greenish gray, damp, no hydrocarbon odor
-15-							
-16-	2						
-17-							
-18-							Clayey Silt, gray, massive and compact, damp, no hydrocarbon odor
-19-							
-20-	3						

silt stone?



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30020 Industrial Pkwy., SW.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB3
 DATE OF DRILLING: 11-21-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-21-							
-22-							
-23-							
-24-							
-25-	4						Clayey Silt, gray, massive and compact, damp, no hydrocarbon odor
-26-							BOTTOM OF BORING AT 25'
-27-							
-28-							
-29-							
-30-							
-31-							
-32-							
-33-							
-34-							
-35-							
-36-							
-37-							
-38-							
-39-							
-40-							



ENVIRONMENTAL BIO-SYSTEMS, INC.
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 30028 Industrial Pkwy., SW.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
 SAN ANTONIO PUMP STA.
 555 CALAVERAS ROAD
 SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB4
 DATE OF DRILLING: 12-18-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Asphalt
-2-							Clayey Gravel with Sand, Gray, moist, no hydrocarbon odor
-3-							
-4-							
-5-							Sandy Clay, brown, moist, slightly plastic, no hydrocarbon odor
-6-							
-7-							
-8-							
-9-							Silty Sand with Clay, occasional presence of gravel, brownish yellow, damp, no odor
-10-							
-11-	1						Gravelly Sand with Clay bindings, occasional presence of boulders, brown to pale reddish brown, damp, no odor
-12-							
-13-							
-14-							
-15-							
-16-	▽						Groundwater at 16-1/2-feet
-17-							
-18-							
-19-							
-20-							BOTTOM OF BORING AT 18'



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30028 Industrial Pkwy, S.W.
 Sulte C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB5
 DATE OF DRILLING: 12-18-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Asphalt
-2-							Clayey Gravel with Sand, Gray to brown, moist, no hydrocarbon odor
-3-							Sandy Clay with some gravel, brown to dark brown, moist, slightly plastic, no hydrocarbon odor
-4-							
-5-							
-6-							
-7-							
-8-							
-9-							
-10-							
-11-	1						Silty Sand with Clay, light yellowish brown, moist, no odor
-12-							
-13-							
-14-							
-15-							
-16-							
-17-							Gravel with traces of Sand and Clay, dry to wet, no odor
-18-							
-19-	▽						Groundwater at 19-1/2-feet
-20-							BOTTOM OF BORING AT 20'



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30020 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB6 MONITORING WELL INSTALLED: _____
 DATE OF DRILLING: 12-18-91 WELL DIAMETER: _____
 CASING TYPE: _____ SLOT SIZE: _____
 LOGGED BY: AMM H. ANAM SIGNATURE: _____
 REGISTRATION: _____ EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Concrete
-2-	1						Sandy Gravel - Gravelly Sand, yellowish gray to brownish gray, color changes to greenish gray at 7', damp, faint hydrocarbon odor noticed at 5'
-3-							
-4-							
-5-	2						
-6-							
-7-	3						
-8-							
-9-	4						
-10-							
-11-							
-12-							
-13-							
-14-							
-15-							
-16-							
-17-							
-18-							
-19-							
-20-							



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992
 JOB NO: 004-189-02
 DRAWN BY: SLS
 APP'D BY: TMB

SITE:
SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

SOIL BORING LOG

BORING DESIGNATION: EB7
 DATE OF DRILLING: 12-18-91
 CASING TYPE: _____
 LOGGED BY: AMM H. ANAM
 REGISTRATION: _____

MONITORING WELL INSTALLED: _____
 WELL DIAMETER: _____
 SLOT SIZE: _____
 SIGNATURE: _____
 EXPIRATION: _____

DEPTH (FEET)	SAMPLE NO.	BLOW CNT.	P.I.D.	GRAPHIC LOG	SOIL TYPE	WELL CONST.	DESCRIPTION AND REMARKS
-1-							Asphalt
-2-							Clayey Silt, dark brown, moist, no hydrocarbon odor
-3-							
-4-							
-5-							
-6-							
-7-							
-8-							
-9-							
-10-	1						Gravelly Sand with clay bindings, gets more gravelly with depth, damp, no hydrocarbon odor
-11-							
-12-							
-13-							Gravel with traces of Sand and Clay damp, no odor
-14-							
-15-							BOTTOM OF BORING AT 15'
-16-							
-17-							
-18-							
-19-							
-20-							



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment

30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

DATE DRAWN: JAN 1992

JOB NO: 004-189-02

DRAWN BY: SLS

APP'D BY: TMB

SITE:

SAN ANTONIO PUMP STA.
555 CALAVERAS ROAD
SUNOL, CALIFORNIA

January 10, 1991

Power Engineering Contractors
San Antonio Pumping Station
555 Calaveras Road
Sunol, CA

B

APPENDIX B

**LABORATORY REPORTS
&
CHAIN OF CUSTODY DOCUMENTATION**

ANAMETRIX REPORT DESCRIPTION

GCMS

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anamatrix ID number.

Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anamatrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anamatrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- ♦ Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- ♦ Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : GCMS
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111066- 1	S1-10'	SOIL	11/07/91	8240
9111066- 1	S1-10'	SOIL	11/07/91	8270

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : GCMS
Sub-Department: GCMS

QA/QC SUMMARY :

- Sample S1-10' was run at a dilution in the EPA Method 8240 analysis due to the high abundance of late eluting compounds present in the sample.
- Surrogate recoveries are outside established limits in the EPA Method 8270 analysis of BLANK.
- Surrogate recoveries are outside established limits in the EPA Method 8270 analysis of sample S1-10'.

Paul Howan
Department Supervisor

11-26-91
Date

Julia Marsh
Chemist

11-26-91
Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 624/8240
 ANAMETRIX, INC. (408)432-8192

Project ID : 004-189-
 Sample ID : S1-10'
 Matrix : SOIL
 Date Sampled : 11/ 7/91
 Date Analyzed : 11/18/91
 Instrument ID : MSD2

Anamatrix ID : 9111066-01
 Analyst : *WJ*
 Supervisor : *WJ*
 Dilution Factor : 50.00
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	500.	ND	U
75-01-4	Vinyl chloride	500.	ND	U
74-83-9	Bromomethane	500.	ND	U
75-00-3	Chloroethane	500.	ND	U
75-69-4	Trichlorofluoromethane	250.	ND	U
75-35-4	1,1-Dichloroethene	250.	ND	U
76-13-1	Trichlorotrifluoroethane	250.	ND	U
67-64-1	Acetone	1000.	ND	U
75-15-0	Carbon disulfide	250.	ND	U
75-09-2	Methylene chloride	250.	ND	U
156-60-5	Trans-1,2-dichloroethene	250.	ND	U
75-34-3	1,1-Dichloroethane	250.	ND	U
156-59-2	Cis-1,2-dichloroethene	250.	ND	U
78-93-3	2-Butanone	1000.	ND	U
67-66-3	Chloroform	250.	ND	U
71-55-6	1,1,1-Trichloroethane	250.	ND	U
56-23-5	Carbon tetrachloride	250.	ND	U
108-05-4	Vinyl acetate	500.	ND	U
71-43-2	Benzene	250.	ND	U
107-06-2	1,2-Dichloroethane	250.	ND	U
79-01-6	Trichloroethene	250.	ND	U
78-87-5	1,2-Dichloropropane	250.	ND	U
75-27-4	Bromodichloromethane	250.	ND	U
110-75-8	2-Chloroethylvinyl ether	250.	ND	U
10061-01-5	Cis-1,3-dichloropropene	250.	ND	U
108-10-1	4-Methyl-2-pentanone	500.	ND	U
108-88-3	Toluene	250.	ND	U
10061-02-6	Trans-1,3-dichloropropene	250.	ND	U
79-00-5	1,1,2-Trichloroethane	250.	ND	U
127-18-4	Tetrachloroethene	250.	ND	U
591-78-6	2-Hexanone	500.	ND	U
124-48-1	Dibromochloromethane	250.	ND	U
108-90-7	Chlorobenzene	250.	ND	U
100-41-4	Ethylbenzene	250.	ND	U
1330-20-7	Xylene (Total)	250.	170.	J
100-42-5	Styrene	250.	ND	U
75-25-2	Bromoform	250.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	250.	ND	U
541-73-1	1,3-Dichlorobenzene	250.	ND	U
106-46-7	1,4-Dichlorobenzene	250.	ND	U
95-50-1	1,2-Dichlorobenzene	250.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 624/8240
 ANAMETRIX, INC. (408)432-8192

Project ID :
 Sample ID : BLANK
 Matrix : SOIL
 Date Sampled : 0/ 0/ 0
 Date Analyzed : 11/18/91
 Instrument ID : MSD2

Anamatrix ID : 1118B002
 Analyst : M
 Supervisor : W
 Dilution Factor : 1.00
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	7.	J
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
110-75-8	2-Chloroethylvinyl ether	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	5.	J
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 624/8240
 ANAMETRIX, INC. (408)432-8192

Project ID : 044-189-
 Matrix : SOLID

Anamatrix ID : 9111066
 Analyst : *LY*
 Supervisor : *UM*

	SAMPLE ID	SU1	SU2	SU3	TOTAL OUT
1	BLANK	100	100	100	0
2	S1-10'	98	101	101	0
3					
4					
5					
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QC LIMITS

SU1 = 1,2-Dichloroethane-d4 (73-130)
 SU2 = Toluene-d8 (74-121)
 SU3 = 1,4-Bromofluorobenzene (70-124)

* Values outside of Anamatrix QC limits

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
 ANAMETRIX, INC. (408)432-8192

Project ID : 004-189-
 Sample ID : S1-10'
 Matrix : SOIL
 Date Sampled : 11/ 7/91
 Date Extracted : 11/19/91
 Amount Extracted : 30.0 g
 Date Analyzed : 11/21/91
 Instrument ID : F3

Anamatrix ID : 9111066-01
 Analyst : *WJ*
 Supervisor : *WJ*

Dilution Factor : 10.00
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	PHENOL	3300.	ND	U
111-44-4	BIS(2-CHLOROETHYL) ETHER	3300.	ND	U
95-57-8	2-CHLOROPHENOL	3300.	ND	U
541-73-1	1,3-DICHLOROBENZENE	3300.	ND	U
106-46-7	1,4-DICHLOROBENZENE	3300.	ND	U
100-51-6	BENZYL ALCOHOL	3300.	ND	U
95-50-1	1,2-DICHLOROBENZENE	3300.	ND	U
95-48-7	2-METHYLPHENOL	3300.	ND	U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	3300.	ND	U
106-44-5	4-METHYLPHENOL	3300.	ND	U
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	3300.	ND	U
67-72-1	HEXACHLOROETHANE	3300.	ND	U
98-95-3	NITROBENZENE	3300.	ND	U
78-59-1	ISOPHORONE	3300.	ND	U
88-75-5	2-NITROPHENOL	3300.	ND	U
105-67-9	2,4-DIMETHYLPHENOL	3300.	ND	U
65-85-0	BENZOIC ACID	17000.	ND	U
111-91-1	BIS(2-CHLOROETHOXY) METHANE	3300.	ND	U
120-83-2	2,4-DICHLOROPHENOL	3300.	ND	U
120-82-1	1,2,4-TRICHLOROBENZENE	3300.	ND	U
91-20-3	NAPHTHALENE	3300.	3200.	J
106-47-8	4-CHLOROANILINE	3300.	ND	U
87-68-3	HEXACHLOROBUTADIENE	3300.	ND	U
59-50-7	4-CHLORO-3-METHYLPHENOL	3300.	ND	U
91-57-6	2-METHYLNAPHTHALENE	3300.	20000.	U
77-47-4	HEXACHLOROCYCLOPENTADIENE	3300.	ND	U
88-06-2	2,4,6-TRICHLOROPHENOL	3300.	ND	U
95-95-4	2,4,5-TRICHLOROPHENOL	17000.	ND	U
91-58-7	2-CHLORONAPHTHALENE	3300.	ND	U
88-74-4	2-NITROANILINE	17000.	ND	U
131-11-3	DIMETHYLPHTHALATE	3300.	ND	U
208-96-8	ACENAPHTHYLENE	3300.	ND	U
606-20-2	2,6-DINITROTOLUENE	3300.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
 ANAMETRIX, INC. (408)432-8192

Project ID : 004-189-
 Sample ID : S1-10'
 Matrix : SOIL
 Date Sampled : 11/ 7/91
 Date Extracted : 11/19/91
 Amount Extracted : 30.0 g
 Date Analyzed : 11/21/91
 Instrument ID : F3

Anamatrix ID : 9111066-01
 Analyst : *WJ*
 Supervisor : *WJ*

Dilution Factor : 10.00
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
99-09-2	3-NITROANILINE	17000.	ND	U
83-32-9	ACENAPHTHENE	3300.	2500.	J
51-28-5	2,4-DINITROPHENOL	17000.	ND	U
100-02-7	4-NITROPHENOL	17000.	ND	U
132-64-9	DIBENZOFURAN	3300.	ND	U
121-14-2	2,4-DINITROTOLUENE	3300.	ND	U
84-66-2	DIETHYLPHTHALATE	3300.	ND	U
7005-72-3	4-CHLOROPHENYL-PHENYLETHER	3300.	ND	U
86-73-7	FLUORENE	3300.	2600.	J
100-01-6	4-NITROANILINE	17000.	ND	U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	17000.	ND	U
86-30-6	N-NITROSODIPHENYLAMINE (1)	3300.	ND	U
101-55-3	4-BROMOPHENYL-PHENYLETHER	3300.	ND	U
118-74-1	HEXACHLOROBENZENE	3300.	ND	U
87-86-5	PENTACHLOROPHENOL	17000.	ND	U
85-01-8	PHENANTHRENE	3300.	4500.	
120-12-7	ANTHRACENE	3300.	ND	U
84-74-2	DI-N-BUTYLPHTHALATE	3300.	ND	U
206-44-0	FLUORANTHENE	3300.	ND	U
129-00-0	PYRENE	3300.	ND	U
85-68-7	BUTYLBENZYLPHTHALATE	3300.	ND	U
91-94-1	3,3'-DICHLOROBENZIDINE	6700.	ND	U
56-55-3	BENZO (A) ANTHRACENE	3300.	ND	U
218-01-9	CHRYSENE	3300.	ND	U
117-81-7	BIS (2-ETHYLHEXYL) PHTHALATE	3300.	ND	U
117-84-0	DI-N-OCTYLPHTHALATE	3300.	ND	U
205-99-2	BENZO (B) FLUOROANTHENE	3300.	ND	U
207-08-9	BENZO (K) FLUOROANTHENE	3300.	ND	U
50-32-8	BENZO (A) PYRENE	3300.	ND	U
193-39-5	INDENO (1,2,3-CD) PYRENE	3300.	ND	U
53-70-3	DIBENZ [A, H] ANTHRACENE	3300.	ND	U
191-24-2	BENZO (G, H, I) PERYLENE	3300.	ND	U
62-75-9	N-NITROSODIMETHYLAMINE	3300.	ND	U
4165-61-1	ANILINE	3300.	ND	U
103-33-3	AZOBENZENE	3300.	ND	U
92-87-5	BENZIDINE	17000.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
 ANAMETRIX, INC. (408)432-8192

Project ID :
 Sample ID : BLANK
 Matrix : SOIL
 Date Sampled : 0/ 0/ 0
 Date Extracted : 11/19/91
 Amount Extracted : 30.0 g
 Date Analyzed : 11/20/91
 Instrument ID : F3

Anamatrix ID : 1119B001
 Analyst : *WJ*
 Supervisor : *CM*

Dilution Factor : 1.00
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
108-95-2	PHENOL	330.	ND	U
111-44-4	BIS(2-CHLOROETHYL) ETHER	330.	ND	U
95-57-8	2-CHLOROPHENOL	330.	ND	U
541-73-1	1,3-DICHLOROBENZENE	330.	ND	U
106-46-7	1,4-DICHLOROBENZENE	330.	ND	U
100-51-6	BENZYL ALCOHOL	330.	ND	U
95-50-1	1,2-DICHLOROBENZENE	330.	ND	U
95-48-7	2-METHYLPHENOL	330.	ND	U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	330.	ND	U
106-44-5	4-METHYLPHENOL	330.	ND	U
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	330.	ND	U
67-72-1	HEXACHLOROETHANE	330.	ND	U
98-95-3	NITROBENZENE	330.	ND	U
78-59-1	ISOPHORONE	330.	ND	U
88-75-5	2-NITROPHENOL	330.	ND	U
105-67-9	2,4-DIMETHYLPHENOL	330.	ND	U
65-85-0	BENZOIC ACID	1700.	ND	U
111-91-1	BIS(2-CHLOROETHOXY)METHANE	330.	ND	U
120-83-2	2,4-DICHLOROPHENOL	330.	ND	U
120-82-1	1,2,4-TRICHLOROBENZENE	330.	ND	U
91-20-3	NAPHTHALENE	330.	ND	U
106-47-8	4-CHLOROANILINE	330.	ND	U
87-68-3	HEXACHLOROBUTADIENE	330.	ND	U
59-50-7	4-CHLORO-3-METHYLPHENOL	330.	ND	U
91-57-6	2-METHYLNAPHTHALENE	330.	ND	U
77-47-4	HEXACHLOROCYCLOPENTADIENE	330.	ND	U
88-06-2	2,4,6-TRICHLOROPHENOL	330.	ND	U
95-95-4	2,4,5-TRICHLOROPHENOL	1700.	ND	U
91-58-7	2-CHLORONAPHTHALENE	330.	ND	U
88-74-4	2-NITROANILINE	1700.	ND	U
131-11-3	DIMETHYLPHTHALATE	330.	ND	U
208-96-8	ACENAPHTHYLENE	330.	ND	U
606-20-2	2,6-DINITROTOLUENE	330.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
 ANAMETRIX, INC. (408)432-8192

Project ID :
 Sample ID : BLANK
 Matrix : SOIL
 Date Sampled : 0/ 0/ 0
 Date Extracted : 11/19/91
 Amount Extracted : 30.0 g
 Date Analyzed : 11/20/91
 Instrument ID : F3

Anamatrix ID : 1119B001
 Analyst :
 Supervisor : *WJ*

Dilution Factor : 1.00
 Conc. Units : ug/Kg

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
99-09-2	3-NITROANILINE	1700.	ND	U
83-32-9	ACENAPHTHENE	330.	ND	U
51-28-5	2,4-DINITROPHENOL	1700.	ND	U
100-02-7	4-NITROPHENOL	1700.	ND	U
132-64-9	DIBENZOFURAN	330.	ND	U
121-14-2	2,4-DINITROTOLUENE	330.	ND	U
84-66-2	DIETHYLPHTHALATE	330.	ND	U
7005-72-3	4-CHLOROPHENYL-PHENYLETHER	330.	ND	U
86-73-7	FLUORENE	330.	ND	U
100-01-6	4-NITROANILINE	1700.	ND	U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1700.	ND	U
86-30-6	N-NITROSODIPHENYLAMINE (1)	330.	ND	U
101-55-3	4-BROMOPHENYL-PHENYLETHER	330.	ND	U
118-74-1	HEXACHLOROBENZENE	330.	ND	U
87-86-5	PENTACHLOROPHENOL	1700.	ND	U
85-01-8	PHENANTHRENE	330.	ND	U
120-12-7	ANTHRACENE	330.	ND	U
84-74-2	DI-N-BUTYLPHTHALATE	330.	ND	U
206-44-0	FLUORANTHENE	330.	ND	U
129-00-0	PYRENE	330.	ND	U
85-68-7	BUTYLBENZYLPHTHALATE	330.	ND	U
91-94-1	3,3'-DICHLOROBENZIDINE	670.	ND	U
56-55-3	BENZO (A) ANTHRACENE	330.	ND	U
218-01-9	CHRYSENE	330.	ND	U
117-81-7	BIS (2-ETHYLHEXYL) PHTHALATE	330.	ND	U
117-84-0	DI-N-OCTYLPHTHALATE	330.	ND	U
205-99-2	BENZO (B) FLUOROANTHENE	330.	ND	U
207-08-9	BENZO (K) FLUOROANTHENE	330.	ND	U
50-32-8	BENZO (A) PYRENE	330.	ND	U
193-39-5	INDENO (1,2,3-CD) PYRENE	330.	ND	U
53-70-3	DIBENZ [A, H] ANTHRACENE	330.	ND	U
191-24-2	BENZO (G, H, I) PERYLENE	330.	ND	U
62-75-9	N-NITROSODIMETHYLAMINE	330.	ND	U
4165-61-1	ANILINE	330.	ND	U
103-33-3	AZOBENZENE	330.	ND	U
92-87-5	BENZIDINE	1700.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 625/8270
ANAMETRIX, INC. (408)432-8192

Project ID : 004-189-
Matrix : SOLID

Anamatrix ID : 9111066
Analyst : *W*
Supervisor : *M*

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6	TOTAL OUT
1	BLANK	82	52	96	112 *	108	126 *	2
1	S1-10'	69	50	87	107 *	63	120 *	2
3								
4								
5								
6								
7								
8								
9								
10								
11								
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27								
28								
29								
30								

QC LIMITS

 SU1 = 2-FLUOROPHENOL (14-118)
 SU2 = PHENOL-D5 (20-122)
 SU3 = NITROBENZENE-D5 (11-101)
 SU4 = 2-FLUOROBIPHENYL (17-102)
 SU5 = 2,4,6-TRIBROMOPHENOL (14-151)
 SU6 = TERPHENYL-D14 (10- 74)

* Values outside of Anamatrix QC limits

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111066- 2	SP1	SOIL	11/07/91	BTEX
9111066- 3	SP2	SOIL	11/07/91	BTEX
9111066- 4	SP3	SOIL	11/07/91	BTEX
9111066- 5	SP4	SOIL	11/07/91	BTEX
9111066- 6	SP5	SOIL	11/07/91	BTEX
9111066- 7	SP6	SOIL	11/07/91	BTEX
9111066- 8	SP7	SOIL	11/07/91	BTEX
9111066- 1	S1-10'	SOIL	11/07/91	TPHd
9111066- 2	SP1	SOIL	11/07/91	TPHd
9111066- 3	SP2	SOIL	11/07/91	TPHd
9111066- 4	SP3	SOIL	11/07/91	TPHd
9111066- 5	SP4	SOIL	11/07/91	TPHd
9111066- 6	SP5	SOIL	11/07/91	TPHd
9111066- 7	SP6	SOIL	11/07/91	TPHd
9111066- 8	SP7	SOIL	11/07/91	TPHd
9111066- 1	S1-10'	SOIL	11/07/91	TPHg

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample S1-10' is primarily due to the presence of a heavier petroleum product, possibly diesel or kerosene.

Cheryl Beckman 11/22/91
Department Supervisor Date

Steve Pina 11/22/91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9111066
Matrix : SOIL
Date Sampled : 11/07/91

Project Number : 044-189-01
Date Released : 11/22/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# S1-10'	Sample I.D.# SP1	Sample I.D.# SP2	Sample I.D.# SP3	Sample I.D.# SP4
Benzene	0.005	-	ND	ND	ND	ND
Toluene	0.005	-	ND	ND	ND	ND
Ethylbenzene	0.005	-	ND	ND	ND	ND
Total Xylenes	0.005	-	ND	ND	ND	ND
TPH as Gasoline	0.5	990	-	-	-	-
% Surrogate Recovery		95%	99%	78%	81%	89%
Instrument I.D.		HP8	HP12	HP12	HP8	HP12
Date Analyzed		11/11/91	11/11/91	11/11/91	11/12/91	11/11/91
RLMF		100	1	1	1	1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Steve Ames 11/22/91
Analyst Date

Cheryl Balman 11/22/91
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
 (GASOLINE WITH BTEX)
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9111066
 Matrix : SOIL
 Date Sampled : 11/07/91

Project Number : 004-189-01
 Date Released : 11/22/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# SP5	Sample I.D.# SP6	Sample I.D.# SP7	Sample I.D.# 08B1111A	Sample I.D.# 08B1112A
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND	ND	ND
TPH as Gasoline	0.5	-	-	-	ND	ND
% Surrogate Recovery		54%	72%	66%	95%	92%
Instrument I.D.		HP12	HP12	HP12	HP8	HP8
Date Analyzed		11/11/91	11/11/91	11/11/91	11/11/91	11/12/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

[Signature]
 Analyst _____ Date 11/26/91

[Signature]
 Supervisor _____ Date 11/25/91

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
 (GASOLINE WITH BTEX)
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9111066
 Matrix : SOIL
 Date Sampled : N/A

Project Number : 004-189-01
 Date Released : 11/22/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# 12B1111A BLANK
Benzene	0.005	ND
Toluene	0.005	ND
Ethylbenzene	0.005	ND
Total Xylenes	0.005	ND
TPH as Gasoline	0.5	ND
% Surrogate Recovery		121%
Instrument I.D.		HP12
Date Analyzed		11/11/91
RLMF		1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C. Fan
 Analyst 11.24.91
Date

Cheryl Balmer
 Supervisor 11/24/91
Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9111066
 Matrix : SOIL
 Date Sampled : 11/07/91
 Date Extracted: 11/19/91

Project Number : 004-189-01
 Date Released : 11/22/91
 Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9111066-01	SP-10'	11/21/91	100	3800
9111066-02	SP1	11/21/91	10	ND
9111066-03	SP2	11/21/91	10	62
9111066-04	SP3	11/21/91	10	89
9111066-05	SP4	11/21/91	10	47
9111066-06	SP5	11/21/91	10	ND
9111066-07	SP6	11/21/91	10	52
9111066-08	SP7	11/21/91	10	ND
DSBL111991	METHOD BLANK	11/21/91	10	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHD - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Anna S. Hill 11/25/91
 Analyst Date

Cheryl Palmer 11/25/91
 Supervisor Date

BTEX METHOD SPIKE REPORT
 EPA METHOD 5030 WITH GC/PID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD SPIKE
 Matrix : WATER
 Date Sampled : N/A
 Date Analyzed : 11/11/91

Anamatrix I.D.: SPK1111
 Analyst : *J*
 Supervisor : *SP*
 Date Released : 11/22/91
 Instrument ID : HP12

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	REC MS	MSD (ug/L)	REC MSD	RPD	%REC LIMITS
Benzene	10	8.3	83%	8.6	86%	4%	46-149
Toluene	10	9.0	90%	9.0	90%	0%	43-146
Ethylbenzene	10	11.0	110%	11.0	110%	0%	51-138
M+P-Xylenes	6.7	6.2	93%	6.1	91%	-2%	39-161
O-Xylene	3.3	3.0	90%	3.0	90%	0%	37-156
P-BFB			108%		102%		53-147

* Limits established by Anamatrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111066- 1	S1-10'	SOIL	11/07/91	5520EF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Carl C. Beal 11/25/91
Department Supervisor Date

Elias Xanthopoulos 11/25/91
Chemist Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : 004-189-01
Matrix : SOIL
Date sampled : 11/07/91
Date ext. TOG : 11/20/91
Date anl. TOG : 11/20/91

Anamatrix I.D. : 9111066
Analyst : *SKB*
Supervisor : *CB*
Date released : 11/22/91

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9111066-01	S1-10'	30	1,600
GSBL112091	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 5520E&F.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111066- 1	S1-10'	SOIL	11/07/91	6010

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Wanninger 11/12/91
Department/Supervisor Date

Mona Kame 11/12/91
Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9111066
 Matrix : SOIL
 Date Sampled : 11/07/91
 Project Number: 004-189-01

Date Prepared : 11/08/91
 Date Analyzed : 11/11/91
 Date Released : 11/12/91
 Instrument I.D.: ICP1

ELEMENTS	EPA Method#	Reporting Limit (mg/Kg)	Sample I.D.# S1-10'	Sample I.D.# BLANK
Cadmium (Cd)	6010	0.25	ND	ND
Total Cr	6010	0.50	48.3	ND
Nickel (Ni)	6010	2.0	61.7	ND
Lead (Pb)	6010	2.0	3.2	ND
Zinc (Zn)	6010	1.0	40.3	ND

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Methods for Evaluating Solid Waste, SW-846 3rd Edition November 1986.

Wahyuhayuh 11/12/91
 Supervisor Date

Mona Kamel 11/12/91
 Chemist Date



ENVIRONMENTAL BIO-SYSTEMS, INC.

Innovative Solutions for a Better Environment

30028 Industrial Pkwy., S.W.

Suite C

Hayward, CA 94544

CHAIN OF CUSTODY

9111066

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

- Tank Removal Samples

PROJECT NUMBER: 004-189-01

CLIENT: Power Engineering

SITE: City of San Francisco
San Antonio Pump Station
5555 Calaveras
Sanol, CA

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	ANALYSIS							TURNAROUND	SAMPLE CONDITION	LAB SAMPLE #
				TPH Diesel	BTEX	TPH gas	8240	8270	5520 EF	Cd, Cr, Ni, Pb, Zn			
1 S1-10'	Soil	1	✓	✓	✓	✓	✓	✓	✓	✓	2 week	No headspace	
2 SP1				✓	✓								↓
3 SP2				✓	✓								↓
4 SP3				✓	✓								↓
5 SP4				✓	✓								↓
6 SP5				✓	✓								↓
7 SP6				✓	✓								↓
8 SP7										↓	Headspace		
9 SC1 A-D	✓	A	✓							✓	Hold	No headspace	

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY		RECEIVED BY	DATE	TIME
	11/7/91	16:30	Tim Babcock		[Signature]	11/07/91	17:30
RELEASED BY	DATE	TIME		RECEIVED BY	DATE	TIME	
[Signature]	11/7/91	17:30		[Signature]	11/07/91	17:30	
RELEASED BY	DATE	TIME		RECEIVED BY	DATE	TIME	
SHIPPED VIA	DATE SENT	TIME SENT	COOLER #				



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Environmental Biosystems
30028 Industrial Parkway SW
Hayward, CA 94544

Client Project ID: #004-189-02
Sample Descript: Soil, SP-Profile

Sampled: Dec 11, 1991
Received: Dec 11, 1991
Analyzed: Dec 12, 1991
Reported: Dec 13, 1991

Attention: Tim Babcock

Lab Number: 112-1736

CORROSIVITY, IGNITABILITY, AND REACTIVITY

Analyte	Detection Limit	Sample Results
Corrosivity: pH.....	N.A.	9.1
Ignitability: Flashpoint (Pensky-Martens), °C.....	N.A.	> 100 °C
Reactivity: Sulfide, mg/kg.....	10	N.D.
Cyanide, mg/kg.....	0.50	N.D.
Reaction with water.....	N.A.	Negative

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Tod Granicher
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Environmental Biosystems
30028 Industrial Parkway SW
Hayward, CA 94544

Client Project ID: #004-189-02

Attention: Tim Babcock

QC Sample Group: 112-1736

Reported: Dec 13, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	pH	R. Sulfide	Cyanide
---------	----	------------	---------

Method:	EPA 9040	EPA 9030	EPA 9010
Analyst:	J. Martinez	B. Samra	L. A. Colon
Reporting Units:	N.A.	mg/kg	mg/kg
Date Analyzed:	Dec 2, 1991	Dec 12, 1991	Dec 10, 1991
QC Sample #:	112-1736	112-1736	112-0906

Sample Conc.:	9.1	N.D.	N.D.
Spike Conc. Added:	N.A.	1300	9.5
Conc. Matrix Spike:	N.A.	1300	8.2
Matrix Spike % Recovery:	N.A.	100	86
Conc. Matrix Spike Dup.:	9.1	1300	8.1
Matrix Spike Duplicate % Recovery:	N.A.	100	85
Relative % Difference:	0.0	0.0	1.2

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



ENVIRONMENTAL BIO-SYSTEMS, INC.

Innovative Solutions for a Better Environment

30028 Industrial Pkwy., S.W.

Suite C

Hayward, CA 94544

CHAIN OF CUSTODY

PROJECT NUMBER 004-189-02

CLIENT POWER ENGINEERING

SITE CALAVERAS ROAD
555 SUN

SUNOL, CA

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	ANALYSIS								TURNAROUND	SAMPLE CONDITION	LAB SAMPLE#
SP-PROFILE	SOIL	1	RCI	✓	11	2	17	36				24 HR. RUSH		

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION _____ OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

SAMPLING COMPLETED DATE 12/11/91 TIME 1430 SAMPLING PERFORMED BY Tim Babcock

RELEASED BY <u>[Signature]</u>	DATE <u>12/11/91</u>	TIME <u>16:17</u>	RECEIVED BY <u>[Signature]</u>	DATE <u>12-11-91</u>	TIME <u>1617</u>
RELEASED BY <u>[Signature]</u>	DATE <u>12/11/91</u>	TIME <u>16:40</u>	RECEIVED BY <u>[Signature]</u>	DATE <u>12/11</u>	TIME <u>1640</u>
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA _____ DATE SENT _____ TIME SENT _____ COOLER # _____

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9112110
Date Received : 12/11/91
Project ID : 004-189-02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9112110- 1	SP-PROFILE,S	SOIL	12/11/91	BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111066
Date Received : 11/07/91
Project ID : 004-189-01
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Cal C. Beal 11/25/91
Department Supervisor Date

Elias Xanthos 11/25/91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9112110
Matrix : SOIL
Date Sampled : 12/11/91

Project Number : 004-189-02
Date Released : 12/12/91

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# SP- PROFILE,S 08B1212A -01	Sample I.D.# BLANK
Benzene	0.005	ND	ND
Toluene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Total Xylenes	0.005	ND	ND
% Surrogate Recovery		83%	117%
Instrument I.D.		HP8	HP8
Date Analyzed		12/12/91	12/12/91
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Steve J. ... 12-13-91
Analyst Date

Michael ... 12/13/91
Supervisor Date



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

CHAIN OF CUSTODY

9112110

(2) T

1705

PROJECT NUMBER **004-187-02**
 CLIENT **POWER ENGINEERING**
 SITE **555 CALAVERAS ROAD**
SUNOL, CA

ANALYSIS						
COMPOSITE	REF 12/11/91 BTEX					

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION _____ OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	TURNAROUND	SAMPLE CONDITION	LAB SAMPLE#
SP-PROFILE, S	SOIL	1	24 HR. RUSH	No headspace cold	

SAMPLING COMPLETED **12/11/91 1430** | DATE **12/11/91** | TIME **1600** | SAMPLING PERFORMED BY **Tim Babcock**

RELEASED BY **[Signature]** | DATE **12/11/91** | TIME **1600** | RECEIVED BY **H. ANAM** | DATE **12-11-91** | TIME **1600**

RELEASED BY **H. ANAM** | DATE **12-11-91** | TIME **1700** | RECEIVED BY **[Signature]** | DATE **12 11 91** | TIME **1700**

RELEASED BY _____ | DATE _____ | TIME _____ | RECEIVED BY _____ | DATE _____ | TIME _____

SHIPPED VIA _____ | DATE SENT _____ | TIME SENT _____ | COOLER # _____

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111181
Date Received : 11/20/91
Project ID : 004-189-02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111181- 2	TA-10'	SOIL	11/18/91	TPHd

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111181
Date Received : 11/20/91
Project ID : 004-189-02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as diesel for sample TA-10' is primarily due to the presence of a heavier petroleum product, possibly motor oil.

Cheryl Boulanger 11/27/91
Department Supervisor Date

Luca Sher 11/27/91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9111181
Matrix : SOIL
Date Sampled : 11/18/91
Date Extracted: 11/25/91

Project Number : 004-189-02
Date Released : 11/27/91
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9111181-02	TA-10'	11/25/91	10	51
DSBL112591	METHOD BLANK	11/25/91	10	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C. Fern
Analyst 11/27/91
Date

Cheyl Beilman
Supervisor 11/26/91
Date



ENVIRONMENTAL BIO-SYSTEMS, INC.

Innovative Solutions for a Better Environment

30028 Industrial Pkwy., S.W.

Suite C

Hayward, CA 94544

CHAIN OF CUSTODY

PROJECT NUMBER 604-189-02

CLIENT Power Engineering

SITE City of S.F.
San Antonio Pump Sta.
5555 Calaveras Rd.
Sunny, CA

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	ANALYSIS									
				1	2	3	4	5	6	7	8		
TA-7'	soil	1	TPH as Diesel										
TA-10'	↓	↓	Hold										
TC-7'	↓	↓											

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION _____ OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	TURNAROUND	SAMPLE CONDITION	LAB SAMPLE#
TA-7'	soil	1	TPH as Diesel	2 weeks	Hold	11/22
TA-10'	↓	↓	Hold	48hr - called in		11/22
TC-7'	↓	↓		Hold		11/22

SAMPLING COMPLETED: DATE 11/18/91 TIME 1600 SAMPLING PERFORMED BY Tim Babcock

RELEASED BY [Signature] DATE 11/20/91 TIME 11:01 RECEIVED BY [Signature] DATE 11/20/91 TIME 11:01

RELEASED BY [Signature] DATE 11/20/91 TIME 11:45 RECEIVED BY [Signature] DATE 11/20/91 TIME 11:01

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA _____ DATE SENT _____ TIME SENT _____ COOLER # _____

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111216
Date Received : 11/22/91
Project ID : 004-189-02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9111216- 2	EB1-14.5'	SOIL	11/21/91	TPHd
9111216- 3	EB2-10.5'	SOIL	11/21/91	TPHd
9111216- 7	EB3-13.5'	SOIL	11/21/91	TPHd

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TIM BABCOCK
ENVIRONMENTAL BIO-SYSTEMS
30028 INDUSTRIAL PARKWAY.S.W., SUITE C
HAYWARD, CA 94544

Workorder # : 9111216
Date Received : 11/22/91
Project ID : 004-189-02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as diesel for sample EB1-14.5' is primarily due to the presence of a heavier petroleum product, possibly motor oil.

Ch. A. Bolmer 11/26/91
Department Supervisor Date

C. Fan 11.26.91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anamatrix W.O.: 9111216
Matrix : SOIL
Date Sampled : 11/21/91
Date Extracted: 11/25/91

Project Number : 004-189-02
Date Released : 11/26/91
Instrument I.D.: HP23

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9111216-02	EB1-14.5'	11/25/91	10	410
9111216-03	EB2-10.5'	11/25/91	10	ND
9111216-07	EB3-13.5'	11/25/91	10	ND
DSBL112591	METHOD BLANK	11/25/91	10	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Ci Fan 11/26/91
Analyst Date

Cheryl Bealmer 11/26/91
Supervisor Date



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

CHAIN OF CUSTODY

911216

PROJECT NUMBER 004-189-02
 CLIENT POWER ENGINEERING
 SITE 555 CALAVERAS ROAD
SUNOL, CA

ANALYSIS								
COMPOSITE	TPH (DIESEL)							

ALL SAMPLES TO BE ANALYZED USING
 METHODS AND DETECTION LIMITS
 ESTABLISHED BY REGION _____
 OF THE STATE WATER RESOURCES
 CONTROL BOARD.

INSTRUCTIONS:
 Attn: Tim Babcock.

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	TURNAROUND	SAMPLE CONDITION	LAB SAMPLE#
1 EB1-12'	SOIL	1	✓	48 hour ^{hold}	No headspace	old
2 EB1-14 1/2'				48 hour		
3 EB2-10 1/2'				48 hour		
4 EB2-15-19'				Hold		
5 EB2-19 1/2'				Hold		
6 EB2-23'				Hold		
7 EB3-13 1/2'				48 hour		
8 EB3-15 1/2'				Hold		
9 EB3-20'				Hold		
10 EB3-24 1/2'	✓	✓	✓	Hold		✓

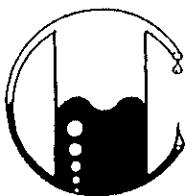
SAMPLING COMPLETED DATE 11-21-91 TIME 16:30 SAMPLING PERFORMED BY [Signature] (H, ANAM)

RELEASED BY [Signature] DATE 11-21-91 TIME 17:35 RECEIVED BY [Signature] DATE 11/21/91 TIME 1735

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA _____ DATE SENT _____ TIME SENT _____ COOLER # _____



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

004-101\011900

Environmental Bio-Systems
30028 Industrial Pkwy, S.W., Ste. C
Hayward, CA 94544
Attn: Tim Babcock
Project Manager

Date Sampled: 12-18-91
Date Received: 12-18-91
Date Reported: 12-18-91

Sample Number	Sample Description	Detection Limit	SOIL
			Gravimetric Waste Oil as Petroleum Oil
		ppm	ppm
Project # 004-191 Power Engineering 555 Calaveras Rd. Sunol, CA			
V121063	EB6-2'	50	<50
V121064	EB6-5'	50	<50
V121066	EB6-9'	50	<50
V121061	EB4-15-16'	50	<50
V121067	EB7-10'	50	<50

QA/QC: Freon Blank is none detected.
Spike Recovery on V121066 is 107%
Duplicate Deviation on V121066 is 1.42%

Note: Analysis was performed using EPA extraction method 3550 with Trichlorotrifluoroethane as solvent, and gravimetric determination by standard methods 503e
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director



ENVIRONMENTAL BIO-SYSTEMS, INC.
 Innovative Solutions for a Better Environment
 30028 Industrial Pkwy., S.W.
 Suite C
 Hayward, CA 94544

CHAIN OF CUSTODY

PROJECT NUMBER **004-191**
 CLIENT **POWER ENGINEERING**
 SITE **555 CALAVERAS RD**
SUNOLY, CA

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	COMPOSITE	ANALYSIS						TURNAROUND	SAMPLE CONDITION	LAB SAMPLE#	
EB 4-11	SOIL	1	5520 (OIL & GREASE)							HOLD			
EB 4-15-16	↓	↓		✓							SAME DAY		
EB 5-11'	↓	↓		✓							HOLD		
EB 6-2'	↓	↓		✓							SAME DAY		
EB 6-5'	↓	↓		✓							SAME DAY		
EB 6-7'	↓	↓		✓							HOLD		
EB 6-9'	↓	↓		✓							SAME DAY		
EB 7-10'	↓	↓		✓							SAME DAY		

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION _____ OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

SAMPLING COMPLETED **12-18-91 16:20** DATE **12-18-91** TIME **16:20** SAMPLING PERFORMED BY **Robert Jones (HANAM)**

RELEASED BY **Robert Jones** DATE **12-18-91** TIME **16:20** RECEIVED BY **Brian Scherker** DATE **12-18-91** TIME **16:20**

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA _____ DATE SENT _____ TIME SENT _____ COOLER # _____

PUBLIC UTILITIES COMMISSION
CITY AND COUNTY OF SAN FRANCISCO



92 JAN 21 11:11:40

SHERRI CHIESA
PRESIDENT

FRANK M. JORDAN, MAYOR

GORDON CHIN
VICE PRESIDENT

THOMAS J. ELZEY, GENERAL MANAGER

JAMES D. JEFFERSON

UTILITIES ENGINEERING BUREAU
RICHARD E. BRANDT, MANAGER

VICTOR G. MAKRAS

NANCY G. WALKER

MUNICIPAL RAILWAY
WATER DEPARTMENT
HETCH HETCHY
WATER AND POWER

January 17, 1992

Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Rm. 200
Oakland, CA 94621
Attn: Scott Seery

Gentlemen:

As representative of the owner of the affected properties, I have read this report. To the best of my knowledge, the information regarding the extent of contamination presented in this report is correct.

Without necessarily agreeing to all the remedial activities suggested by the report, I further attest that the remedial activities proposed will be considered by the City and all necessary and required cleanup work will be performed by the City.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John A. Hetzner".

John A. Hetzner
Resident Engineer

JAH/sra

cc: D Eng
R Herrera
E Hintze
WD-2062 File